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CLAIMS

We claim:

1. A compound of the formula:

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$$(R_4)_n$$
 $(R_3)_m$ (I) ,

or a pharmaceutically-acceptable salt thereof, wherein

X is NR₁, CR₁, or S;

Y₁ and Y₂ are nitrogen or carbon, provided that

a) when X is CR_1 , at least one of Y_1 and Y_2 is nitrogen, and b) when one of Y_1 and Y_2 is carbon, the other of Y_1 and Y_2 is nitrogen and/or X is NR_1 or S, so that ring A defines a five-membered heteroaryl ring having at least two heteroatoms;

 R_1 is hydrogen, halogen, alkyl, substituted alkyl, cyano, OR_5 , NR_5R_6 , $C(=O)R_5$, CO_2R_5 , or aryl;

R₂ is alkyl, substituted alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, heterocyclo, cycloalkyl, or substituted cycloalkyl;

 R_3 and R_4 are independently selected from halogen, alkyl, substituted alkyl, nitro, cyano, OR_7 , NR_7R_8 , $C(=O)R_7$, CO_2R_7 , SR_7 , $C(=O)NR_7R_8$, $NR_7C(=O)R_8$, $NR_7C(=O)OR_8$, $S(O)_qR_7$, $NR_7SO_2R_8$, and $SO_2NR_7R_8$;

 R_5 , R_6 , R_7 , and R_8 are independently selected from hydrogen, alkyl, substituted alkyl, and phenyl, or when attached to the same nitrogen atom (as in NR_5R_6 or NR_7R_8) may join together to form a heterocycle or heteroaryl; and

m, n and q are independently 0, 1, or 2.

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- 2. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which X is NR_1 or CR_1 , and R_1 is hydrogen, lower alkyl, or trifluoromethyl.
- 3. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which X, Y_1 and Y_2 are selected so that ring A defines one of:

15 4. The compound of claim 1 or a pharmaceutically-acceptable salt thereof, in which:

R₂ is C₁₋₄alkyl optionally substituted with OR₉ or NR₁₀R₁₁;

R₉ is hydrogen or lower alkyl; and

R₁₀ and R₁₁ are (i) independently selected from hydrogen, C₁₋₄alkyl, C₁₋₄substituted alkyl, and –(C=O)C₁₋₂alkyl, or alternatively (ii) together form a five to six membered heterocycle or heteroaryl.

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- 5. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which R_2 is C_{1-2} alkyl optionally substituted with one of:
- OH, NH₂, NH(C₁₋₂alkyl), N(C₁₋₂alkyl)₂, NH(C₁₋₂substituted alkyl), N(C₁₋₂substituted alkyl)₂, NH(C=O)C₁₋₂alkyl, or piperidinyl.
- 6. The compound of claim 1 or a pharmaceutically-acceptable salt thereof, in which R₂ is aryl having zero to three substituents selected from halogen, lower alkyl, trifluoromethyl, alkoxy, and nitro.
- 7. The compound of claim 1 or a pharmaceutically-acceptable salt thereof, in which
 - X, Y_1 and Y_2 are selected so that ring A defines one of pyrazolyl, imidazolyl, or thiazolyl;

R₁ is hydrogen, methyl, ethyl, or trifluoromethyl; and

 R_2 is C_{1-2} alkyl optionally substituted with one of OH, NH₂, NH(C_{1-2} alkyl), N(C_{1-2} alkyl)₂, NH(C=O) C_{1-2} alkyl, or a five to six membered heterocycle.

8. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which R_3 and R_4 are selected from halogen, alkyl, substituted alkyl, nitro, cyano, OR_7 , NR_7R_8 , $C(=O)R_7$, CO_2R_7 , SR_7 , $C(=O)NR_7R_8$, $NR_7C(=O)R_8$, $NR_7C(=O)OR_8$, $S(O)_qR_7$, $NR_7SO_2R_8$, and $SO_2NR_7R_8$;

 R_7 and R_8 are independently selected from hydrogen and alkyl; and m and n are independently 0, 1, or 2, provided that m and n are not both 0.

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- 9. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which m and n are both 0.
 - 10. A compound having the formula,

$$(R_4)_n$$
 $(R_3)_m$
 $(R_3)_m$
 $(R_4)_n$
 $(R_3)_m$

or a pharmaceutically-acceptable salt thereof, wherein

X is NR₁, CR₁, or S;

Y₁ and Y₂ are nitrogen or carbon, provided that:

- a) when X is CR_1 , at least one of Y_1 and Y_2 is nitrogen, and b) when one of Y_1 and Y_2 is carbon, the other of Y_1 and Y_2 is nitrogen and/or X is NR_1 or S, so that ring A defines a five-membered heteroaryl ring having at least two heteroatoms;
- R₁ is hydrogen, halogen, lower alkyl, or trifluoromethyl;

R₂ is C₁₋₄ alkyl optionally substituted with a group selected from hydroxy, alkoxy, NH₂, NH(alkyl), N(alkyl)₂, NH(substituted alkyl), N(substituted alkyl)₂, and NH(C=O)alkyl, and heterocycle;

R₃ and R₄ are independently halogen, lower alkyl, substituted lower alkyl, nitro, cyano, alkoxy, amino, -CO₂H, -C(=O)H, or alkylthio; and

m and n are independently 0, 1, or 2.

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11. The compound of claim 10, or a pharmaceutically-acceptable salt thereof, in which X, Y_1 and Y_2 are selected so that ring A defines one of:

$$R_1$$
 R_1 R_1 R_1 R_1 R_1 R_1 R_2 R_3 R_4 R_4

12. The compound of claim 11, or a pharmaceutically-acceptable salt thereof, in which:

 R_2 is C_{1-2} alkyl optionally substituted with a group selected from OH, NH_2 , $NH(C_{1-2}alkyl)$, $N(C_{1-2}alkyl)_2$, $NH(C_{1-2}substituted alkyl)$, $N(C_{1-2}substituted alkyl)_2$, and piperidinyl.

- 13. The compound of claim 1, selected from (i) benzo[g]-4-(2-N-methylaminoethylamino)-1-methylimidazo[1,2-a]quinoxaline; benzo[g]-4-methylamino-1-methylimidazo[1,2-a]quinoxaline;
- benzo[g]-4-(2-N-methylaminoethylamino)-1-methylpyrazolo[1,2-a]quinazoline;
 benzo[g]-4-methylamino-1-methylpyrazolo[1,2-a]quinozoaline;
 1-methyl-4-methylaminobenzo(g)-imidazo(4,5-c)quinoline;
 - 1-methyl-4-(2-N-methylaminoethylamino)benzo(g)imidazo(4,5-c)quinoline,
 - 1-methyl-4-methylaminobenzo(g)-thiazolo(4,5-c)quinoline;
 - 1-methyl-4-(2-N-methylaminoethylamino)benzo(g)thiazolo(4,5-c)quinoline;
 - 1-Methyl-4-(2-hydroxyethylamino)benzo[g]imidazo[1,2-a]quinoxaline,
 - 1-Methyl-4-(2-piperidin-1-yl-ethylamino)benzo[g]imidazo[1,2-a]quinoxaline; and
 - (ii) a pharmaceutically-acceptable salt thereof.

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- 14. A pharmaceutical composition comprising (a) at least one compound according to claim 1, or a pharmaceutically acceptable salt thereof, and (b) a pharmaceutically acceptable carrier or diluent.
- 15. A pharmaceutical composition comprising (a) at least one compound according to claim 10, or a pharmaceutically acceptable salt thereof, and (b) a pharmaceutically acceptable carrier or diluent.
- 16. A method of treating an inflammatory or immune disease or disorder comprising administering to a mammal in need thereof a therapeutically-effective amount of at least one compound according to claim 1.
- 17. A method of treating an inflammatory or immune disease or disorder comprising administering to a mammal in need thereof a therapeutically-effective amount of at least one compound according to claim 10.
- 18. The method of claim 16 in which the inflammatory or immune disease is selected from rheumatoid arthritis, asthma, inflammatory bowel disease, chronic obstructive pulmonary disease, and psoriasis.
- 19. The method of claim 16 in which the inflammatory or immune disease is HIV, HSV-1, breast cancer, prostate cancer, or Hodgkin's lymphoma.